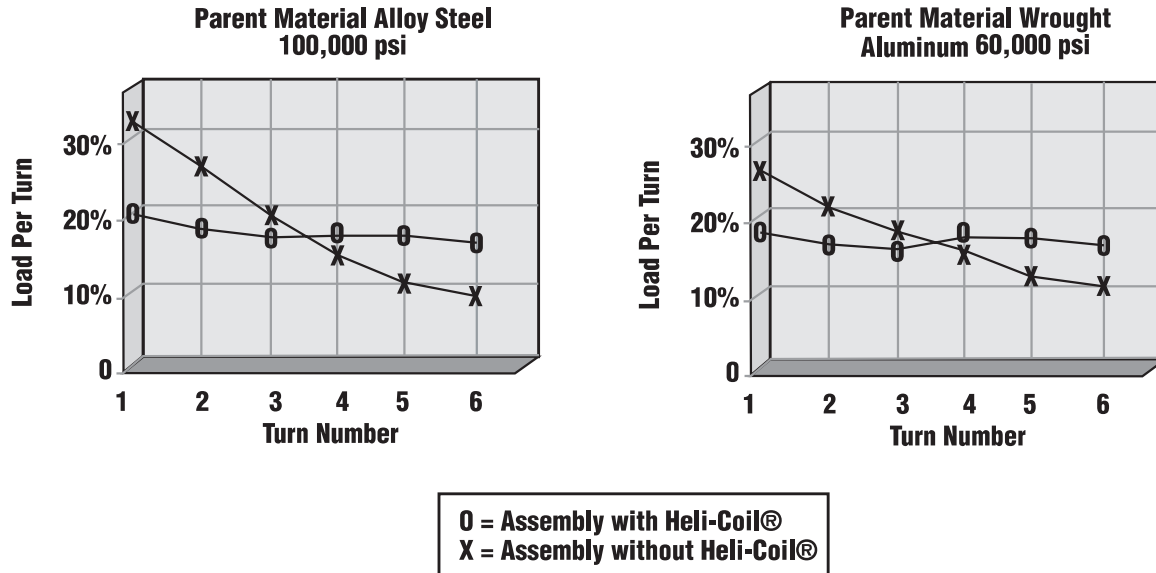


IN ANOTHER TYPICAL FATIGUE STUDY, the load per turn has been shown to be far better distributed with Heli-Coil® inserts than in plain tapped holes. The actual percent improvement of stress distribution is shown in the following graphs taken from the report on this study.\*

### TYPICAL DISTRIBUTION OF LOAD IN PERCENT OF TOTAL STRESS



(\*) "Fatigue of Threaded Joints with Thread Inserts," G.B. Iosilivich; Russian Engineering Journal, Issue No. 12.

## Summary

In shock tests, the Heli-Coil® insert was shown to be superior to plain tapped holes in both ductile parent materials such as cast magnesium and aluminum, and hard (less ductile) parent materials such as cast iron, mild steel, and wrought aluminum.

Vibration and fatigue tests proved that in ductile parent materials the flexible coils of Heli-Coil® inserts transfer virtually 100% of the parent materials' ductility to the mating threads. In hard and less ductile parent materials, Heli-Coil® inserts have a very significant effect on improving the vibration and fatigue life of both the tapped hole and the mating screw or stud.

In the broad range of shock, vibration, and fatigue testing of Heli-Coil® insert assemblies, the equal distribution of both static and dynamic loads to all engaged threads has proved both theoretically and practically significant.

Heli-Coil® is a registered trademark of Stanley Black & Decker.

